

Tanish Rana

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Education

New York University

Master of Science in Computer Science (GPA: 4.00/4.00)

Expected May 2027

New York City, New York

Thapar Institute of Engineering and Technology

Bachelor of Engineering in Computer Science and Business Systems (GPA: 3.49/4.00)

June 2025

India

Experience

ProcDNA Analytics

Jan 2025 – July 2025

Business Analyst (Sales Operations) - US Pharmaceutical Consulting

India

- Owned and **delivered 100+ sales operations dashboards** and ad-hoc analysis deliverables for a **S&P 500 pharmaceutical client**, building SQL pipelines to validate data and eliminate recurring integrity issues.
- Automated Attainment, Contest, and Incentive Compensation reporting workflows and sales-force payout calculations using Excel and VBA, **reducing manual effort by 75%** and improving operational efficiency.
- Conceptualized and developed a secure, modular ICD (International Classification of Diseases) Code Governance Platform (Python, SQL, VBA) with audit trails, **cutting approval cycles by 50%**, enabling self-service analytics, and integrating HCP targeting, activation tracking, and payout validation for a multi-market drug launch; **commercialized and sold for \$20K** to client.
- Partnered directly with client stakeholders to define requirements, design scalable analytics tools, and translate data into actionable insights, strengthening alignment, adoption, and long-term trust.

Weapons and Electronics Systems Engineering Establishment (WESEE), Indian Navy

Dec 2023 – Jan 2024

Research Intern

India

- Developed **TensorFlow** based anomaly detection models utilizing unsupervised learning algorithms, **achieving 92% accuracy** in identifying irregular AIS ship transmissions and enhancing maritime security infrastructure.
- Streamlined **confidential real-time datasets through advanced data cleaning**, improving reliability and accuracy of deployed anomaly detection models.
- Contributed to combat system software in **C++** with **Kafka middleware** for real-time sensor data streaming, and developed **PyQt** dashboards for mission-critical operational visualization.
- Developed unsupervised ML models for HR attrition prediction, **achieving 97% accuracy**.

Projects

CollabDesk – Collaborative Workspace Platform (Project Owner) | React, TypeScript, Django, Python, AWS, Supabase, Auth0, CI/CD

- Led team of 6 developers** in architecting and deploying a full-stack collaborative workspace application using React frontend and Django REST backend, addressing team productivity challenges for remote work environments with **200+ concurrent users**.
- Implemented secure user authentication system integrating **Auth0 APIs** and **AWS** services, designing responsive UI components and RESTful endpoints with automated CI/CD pipeline for seamless deployment and real-time collaboration features.
- Delivered **production-ready application** with robust security protocols and scalable cloud architecture, **achieving 99% uptime** and supporting multiple collaborative workflows with optimized performance metrics.

InfraPilot - Cloud-Native NLP Based DevOps Control Plane | AWS, Amazon Lex, DynamoDB, GitHub Actions, Docker, Kubernetes

- Architected a **serverless AWS control plane** using Lambda and Amazon Lex to translate natural-language commands into automated CI/CD workflows, **reducing deployment time by 60%** across QA and production environments.
- Implemented event-driven orchestration with DynamoDB for state management, integrating GitHub Actions, Docker, and Kubernetes to handle **50+ deployments per week** with **sub-second rollback** capability.
- Designed **fault-tolerant architecture** with strict separation of control, execution, and state layers, achieving 99.9% availability while **cutting infrastructure costs by 40%** compared to traditional CI/CD servers.

Financial Sentiment Analysis for Stock Market Prediction | Python, Pandas, Scikit-learn, Keras, SpaCy, Backtrader

- Built a sentiment-return dataset by **processing 82K+ financial news headlines** and stock returns, **generating 2,700+ ticker-event pairs** through feature engineering and NLP-based text parsing.
- Developed and backtested sentiment-driven trading models using lexicons, ML classifiers, and LSTM, achieving 93% test accuracy and growing a **simulated \$100K portfolio to \$150K (+49%)**.

Technical Skills

Programming Languages: Python, C++, Java, R, SQL, TypeScript, Swift

Frameworks & Libraries: React, TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy, Seaborn, Matplotlib, NLTK, SpaCy, PyQt

Cloud & Tools: AWS, Azure, GCP, Databricks, Git, Excel, CI/CD, Firebase

Concepts & Methodologies: Full-stack Web Development, Data Analytics, Machine Learning, Deep Learning, Data Visualization, Algorithm Design, Software Testing, Project Management, Natural Language Processing (NLP), Large Language Models (LLMs), Database Design & Normalization, API Development, Agile Methodology, Automation